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Title : Sea Otters and Recreational Activities: is there evidence of chronic stress in sea otters and how can this be managed?

Category : Behavior

Student : Doctoral

Preferred Format : Either Oral or Poster Presentation

Abstract : Wildlife tourism (WT) is a fast growing industry often relying on fragile habitats and species. Though WT has positive impacts, e.g. encouraging conservation and environmental education, it can also damage the natural resources it relies upon. This research focuses on interactions between the threatened southern sea otter and recreational vessels in the Monterey National Marine Sanctuary (MBNMS), an area popular for marine recreational activities. This sea otter population has been slow to recover and suffers from high mortality rates due to infectious disease, contamination and fisheries interactions among others. Interactions with recreational vessels may be causing chronic stress to sea otters, a condition causing changes in behavior, immune system suppression and cardiovascular damage in other species, and which could increase sea otters susceptibility to the aforementioned pressures.

This research aims to determine if disturbance from recreational vessels is causing significant changes in sea otter behavioral time budgeting indicative of chronic stress and to improve management of WT/sea otter interactions. Data has been collected for two years between June-September at several study sites in the MBNMS using scan sampling, focal otter observations and radio tracking – over 500 hours of observations have been made. Analysis has shown that two factors (head on approaches and noisy/excited behavior) out of ten investigated (including number, orientation and speed of boats) predict over 70% of the disturbances recorded. Sea otters in sites with high levels of boat traffic spend significantly more time exhibiting alert behaviors indicating an aroused state associated with chronic stress. Radio tracking is ongoing and results will be available by the conference. These results and collaboration with local stakeholders have led to the development of a ‘wildlife watchers card’ for recreational boats, displaying images of alert behaviors and viewing guidelines, which it is hoped will lead to an immediate reduction in disturbance events.